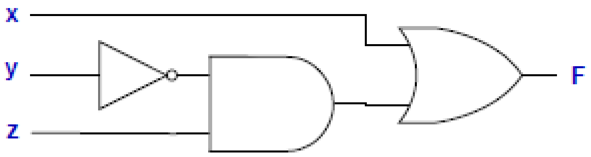
Draw Truth Table and Logic Diagram for Boolean Function (F = x + y’z)

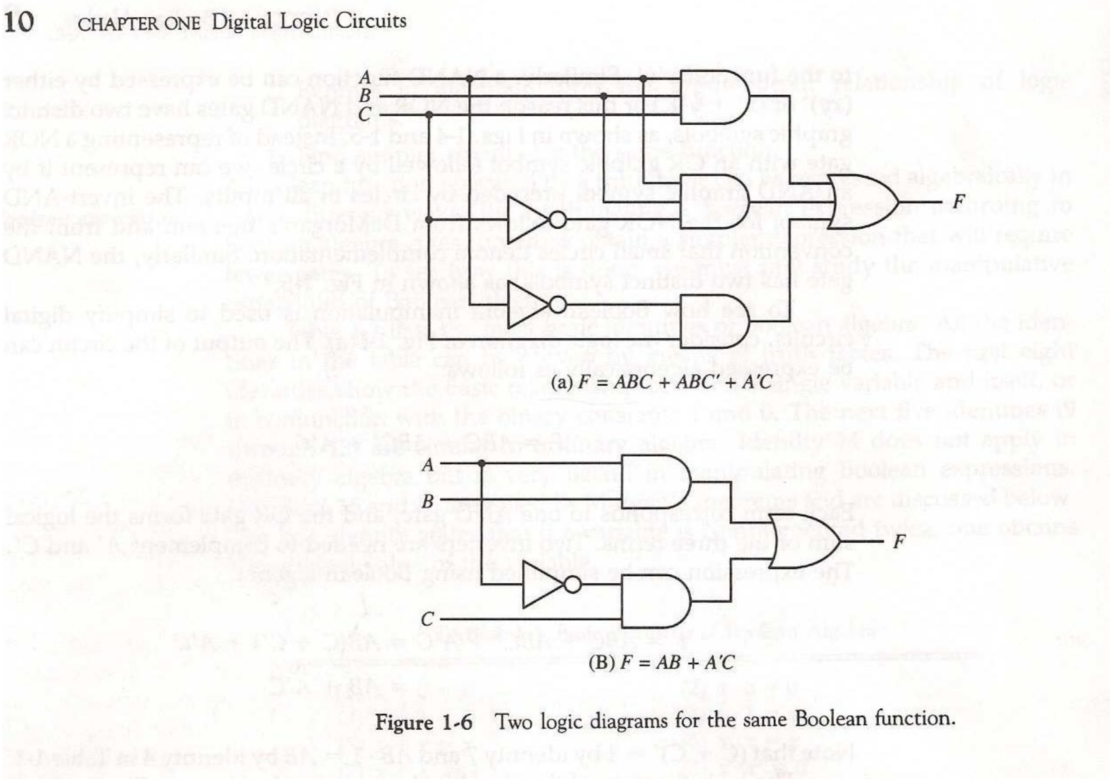
X Y Z	F
0 0 0	0
0 0 1	1
0 1 0	0
0 1 1	0
1 0 0	1
1 0 1	1
1 1 0	1
1 1 1	1



Draw logic diagrams for Function

A- (F=ABC+ABC'+AB')

B- (F=AB+AC')


10 CHAPTER ONE Digital Logic Circuits

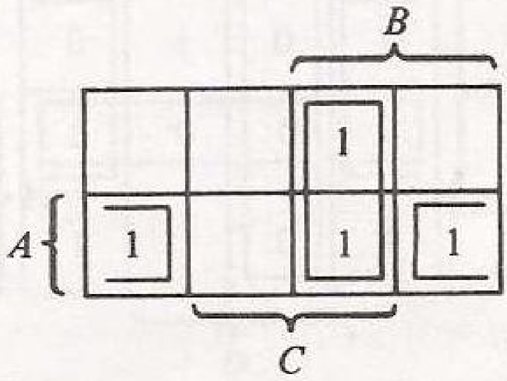
(a) $F = ABC + ABC' + A'C$

(B) $F = AB + A'C$

Figure 1-6 Two logic diagrams for the same Boolean function.

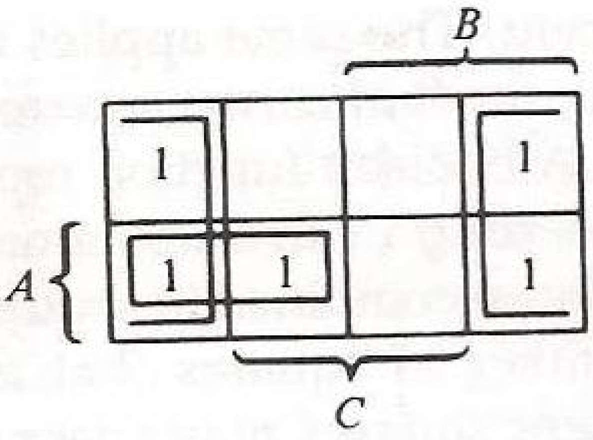
Draw K_Map for $F(A,B,C)= \sum(3,4,6,7)$

Figure 1-8 Map for $F(A, B, C) = \Sigma(3,4,6,7)$.



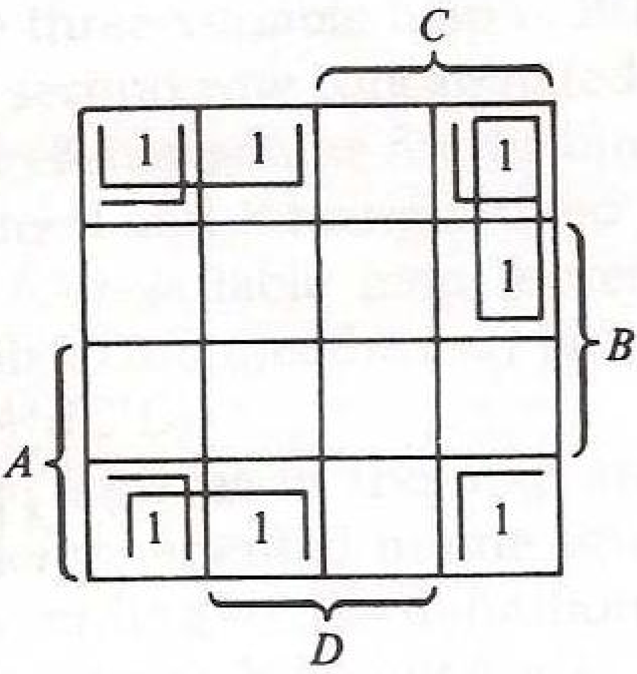
F=BC+AC'

Draw K_Map for $F(A,B,C)= \sum(0,1,2,4,5,6)$



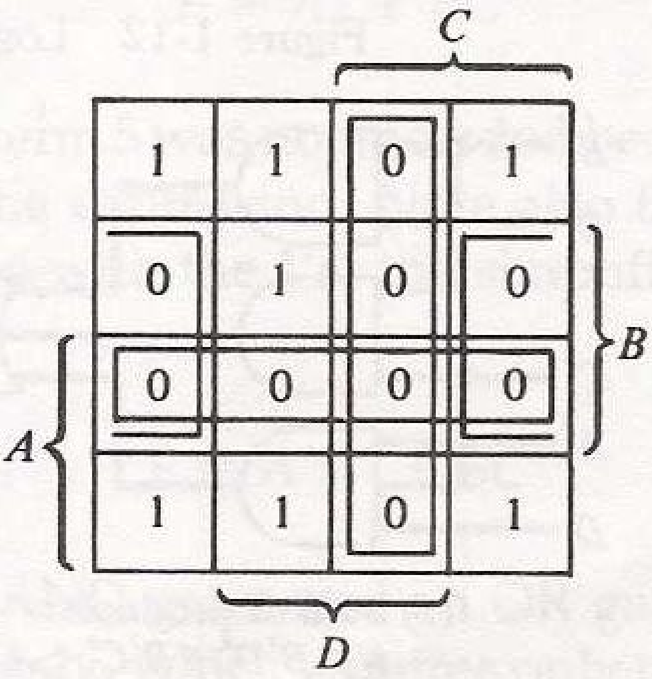
F=C+AB

Draw K_Map for F(A,B,C,D)= ∑(0,1,2,6,8,9,10)



1	1		1
			1
1	1		1

Draw K_Map for F(A,B,C,D)= ∑(0,1,2,5,8,9,10)



1	1	0	1
0	1	0	0
0	0	0	0
1	1	0	1

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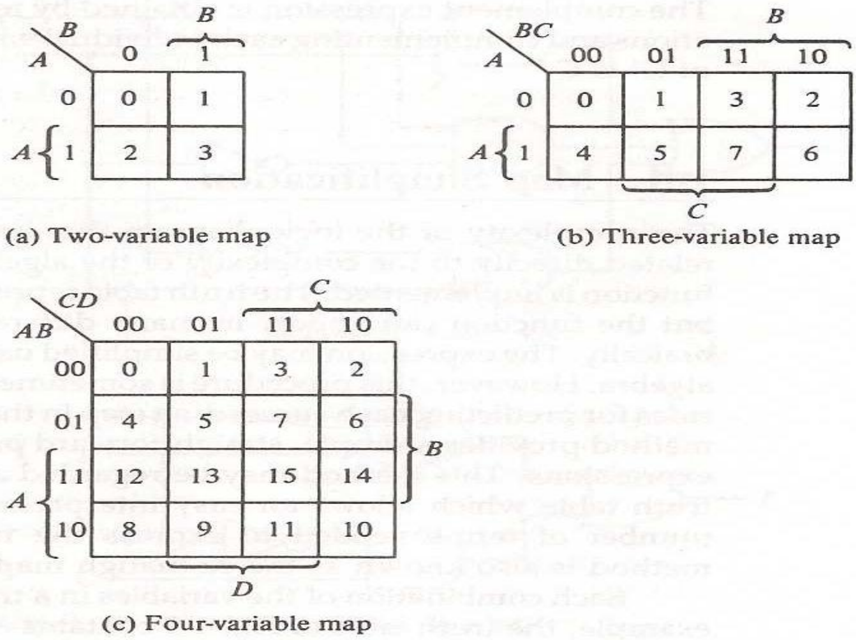
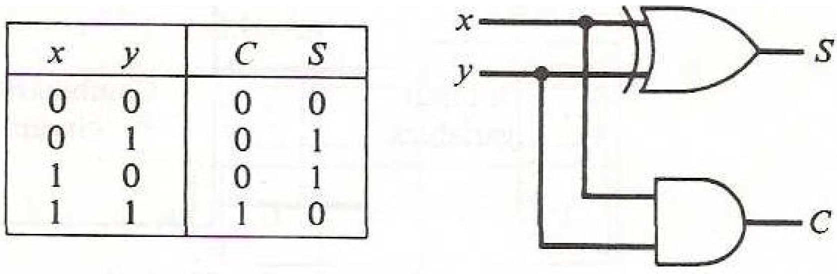


(a) Two-variable map (b) Three-variable map

(c) Four-variable map

What is Hatf-adder Draw

A combinational circuit that performs the arithmetic addition of · two bits is called a hatf-adder.



x	y	C	S
0	0	0	0
0	1	0	1
1	0	0	1
1	1	1	0

(a) Truth table (b) Logic diagram

What is A full-adder Draw

A full-adder is a combinational circuit that forms the arithmetic sum of three input bits . It consists of three inputs and two outputs.

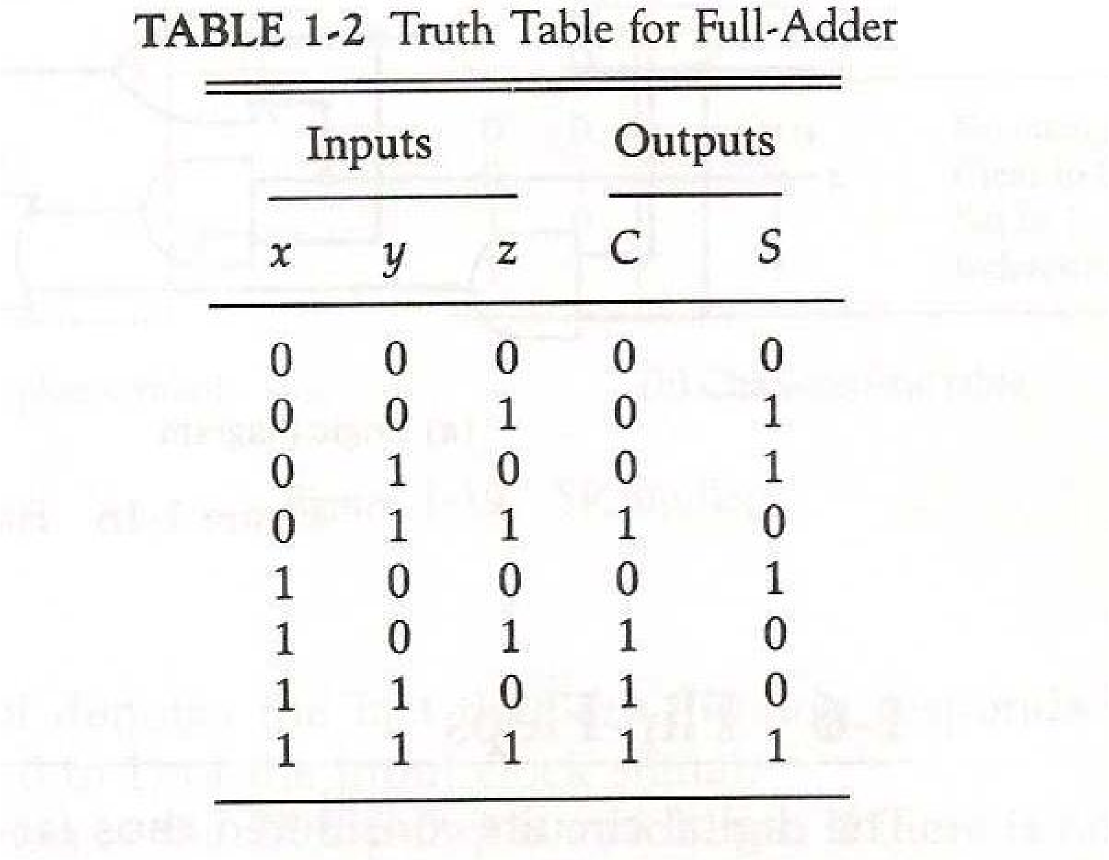


TABLE 1-2 Truth Table for Full-Adder

Inputs			Outputs	
x	*y*	*z*	*C*	*S*
0	0	0	0	0
0	0	1	0	1
0	1	0	0	1
0	1	1	1	0
1	0	0	0	1
1	0	1	1	0
1	1	0	1	0
1	1	1	1	1